Title: APS Policy on Scientific User Access

Summary:
This policy provides a concise overview of the current processes through which an individual obtains beam time at the Advanced Photon Source. The principle underlying all four processes is scientific peer review that is fair, clear, expedient, and sensitive to the needs of users. The first two processes (access as members of Collaborative Access Teams or APS staff) rely on initial peer review of the group, internal peer review of individual projects, and triennial peer review by the APS Scientific Advisory Committee (SAC). General User access requires peer review of research proposals through a central APS-managed review process for each run cycle. For those proposals that cannot be accommodated through the standard General User proposal system, Project Proposals and Partner User Proposals will be considered. Since these latter two proposal types are granted beam time over more than one run cycle, they require additional scrutiny by a SAC subcommittee and APS management.

Access Modes:
Collaborative Access Team member access: On beamlines funded and operated by Collaborative Access Teams (CATs), an agreement signed with each CAT provides CAT members with access to up to 75% of the available beam time; the CAT is then required to support General Users (who are selected through the process described below) for the remaining 25% or more of the time. Assessment of the effectiveness of CAT allocation processes is provided by Sector Review Panels, which evaluate the performance of each sector at least once every three years. The panels consist of external scientific peers and function under the auspices of the APS SAC.

APS staff access: On beamlines operated by the APS, 20% of the beam time is made available to the X-ray Operations and Research (XOR) staff for maintenance, upgrades, and discretionary scientific research. The remaining 80% of the time on these beamlines is awarded through the General User or Partner User programs. The effectiveness of beam time usage by a XOR staff is assessed regularly by APS management and by the APS SAC.

General User access: Access for General Users is awarded under the APS General User Program (GUP), which is a centralized, APS-managed, Web-based peer review proposal process. Prospective General Users submit proposals that are reviewed and rated by one of several Proposal Review Panels (PRPs) composed of scientific peers, primarily external to the APS staff. The PRPs review new proposals before each cycle to develop consensus ratings and comments. Proposals are then allocated beam time by one of two APS Beam time Allocation Committees (BACs): one for Macromolecular Crystallography and one for all other science. Proposals are active for up to two-years.

Criteria for the evaluation of General User proposals are essentially those used by the International Union of Pure and Applied Physics. These are (1) scientific merit, (2) technical feasibility, (3) capabilities of the experimental group, and (4) availability of the required resources (personnel, equipment, samples, etc.)

Project Proposal access: A limited number of General User proposals may justify reliable, predictable access over several cycles (up to two years) on a specific beamline (or several beamlines). These proposals are candidates for project status, under which a fixed amount of beam time is allocated in advance for more than one cycle. A proposal requesting project status must specify the specific beamline or beamlines where the work will be performed and justify the need for that location. The proposer must also justify why the goals of the proposal cannot be achieved effectively or efficiently under a standard General User proposal (e.g., the level of investment, such as effort or setup time, to perform the experiment is so large that it can only be justified if regular or fixed access over several run cycles can be assured, etc.).

Candidate project proposals will be evaluated by the appropriate PRP, then receive additional scrutiny by the subcommittee of the SAC that reviews Partner User proposals (see below). The SAC subcommittee will use the following to determined if the proposal should be granted project status: (1) PRP rating, (2) supplemental information provided by the PI, and (3) input from the sector management of the requested beamline(s). APS management makes final decisions on project status. Each beamline has a cap on the total time that can be assigned to project proposals.

Partner User access: If researchers require guaranteed beam time than cannot be obtained through the General User Program and if the proposed research will ultimately benefit the General User community (e.g., by providing new instrumentation or capabilities that will be available to General Users or by expanding the APS user community), they can apply to become Partner Users on any beamline operated by the APS. Partner User proposals are peer-reviewed by the appropriate PRP and receive further scrutiny by a subcommittee of the APS SAC (the same subcommittee that reviews Project Proposals). The criteria for evaluation of Partner User proposals are (1) PRP rating, (2) positive impact of the partnership on General Users, and (3) input from the sector management of the requested beamline(s). APS management makes the final decisions on the appointment of Partner Users. Prospective Partner Users can compete for up to 30% of the total available user time for up to three years by submitting proposals on those APS-operated beamlines that provide 80% of their beam time to General User program.